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NON-POLYMERIC VALENCY PLATFORM MOLECULES Inventor: Stephen M. COUTTS et al.

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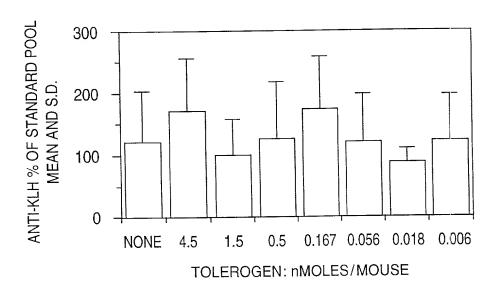


FIG. 2

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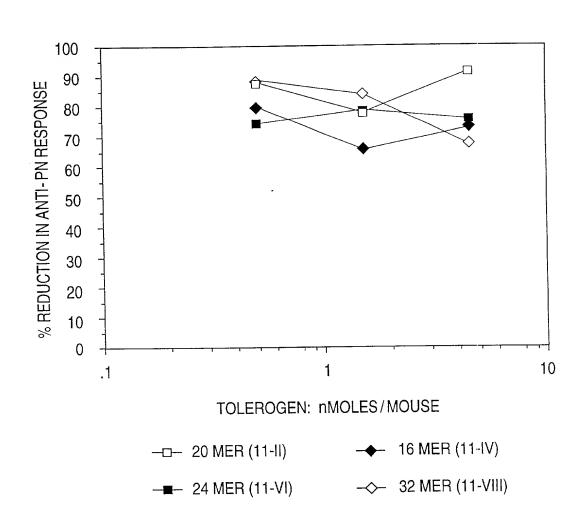
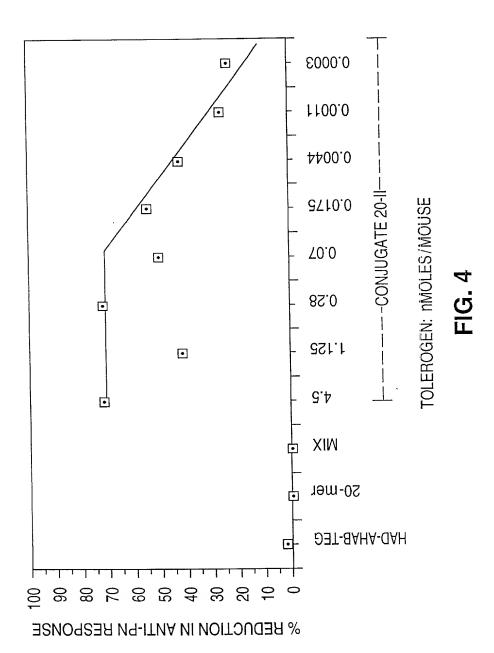


FIG. 3



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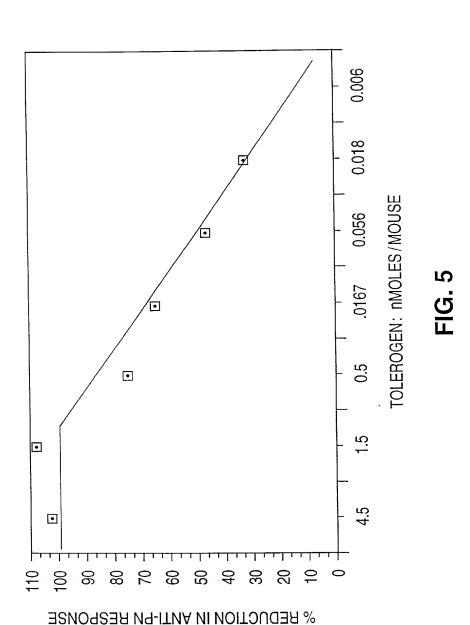
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11-VIII, PN = $(CA)_{16}$ · $(TG)_{16}$

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CH2CONH(CH2)6NHCOCH2S(CH2)6O-P $\dot{\text{CH}}_2\text{CONH}(\text{CH}_2)_6\text{NHCOCH}_2\text{S}(\text{CH}_2)_6\text{O}-\dot{\text{P}}_2$ -NHCO(CH₂)₅NHCOCH₂S(CH₂)₆O—P NHCO(CH₂)₅NHCOCH₂S(CH₂)₆O— 17-II PN= $(CA)_{10}$. $(TG)_{10}$ $\mathbf{PN} = (\mathsf{CA})_{10}$ CH2OCH2CH2NHCOCH2CH2CON BAHA—EDDA AHAB-TEG 17-I

FIG. 6B

 $PN = (CA)_{10}.(TG)_{10}$

20-II

 $\mathbf{PN} = (\mathrm{CA})_{10}$

20-I

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$$\begin{array}{c} S \\ -NHCO(CH_2)_5NHCOCH_2S(CH_2)_6O-P-O-PN \\ O \\ -MHCO(CH_2)_5NHCOCH_2S(CH_2)_6O-P-O-PN \\ -MHCO(CH_2)_5NHCOCH_2S(CH_2)_6O-P-O-PN \\ -MAB-TEG \ (phosphorothioate) \\ \hline 20-III \ PN = (CA)_{10} \\ \hline 20-IV \ PN = (CA)_{10}.(TG)_{10} \\ \end{array}$$

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$$HO(CH_2)_6SCH_2COHN(CH_2)_5CONH \longrightarrow \begin{array}{c} O \\ N \longrightarrow \\ O(CH_2CH_2O)_2CH_2CH_2O \longrightarrow \\ N \longrightarrow \\ O(CH_2CH_2OCH_2CH_2OCH_2CH_2OCH_2CH_2OCH_2)_5NHCOCH_2S(CH_2)_6OH \\ HAD-AHAB-TEG \end{array}$$

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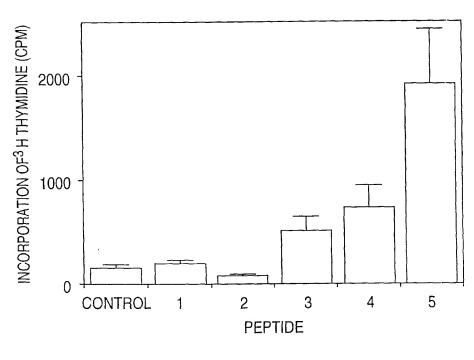


FIG. 8

Title: CONJUGATES OF T CELL EPITOPE DEFICIENT IMMUNOGEN ANALOGS FOR HUMORAL ANERGY AND CHEMICALLY DEFINED NON-POLYMERIC VALENCY PLATFORM MOLECULES Inventor: Stephen M. COUTTS et al.

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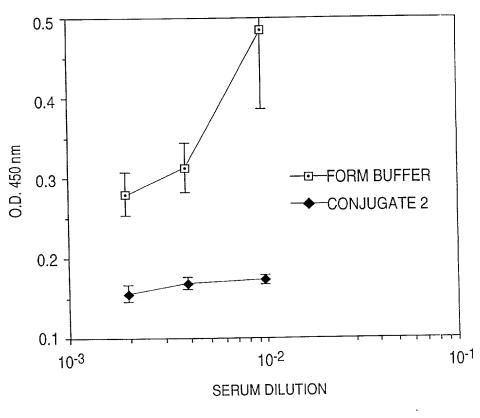


FIG. 9

Title: CONJUGATES OF T CELL EPITOPE DEFICIENT IMMUNOGEN ANALOGS FOR HUMORAL ANERGY AND CHEMICALLY DEFINED NON-POLYMERIC VALENCY PLATFORM MOLECULES Inventor: Stephen V. COUTTS et al.

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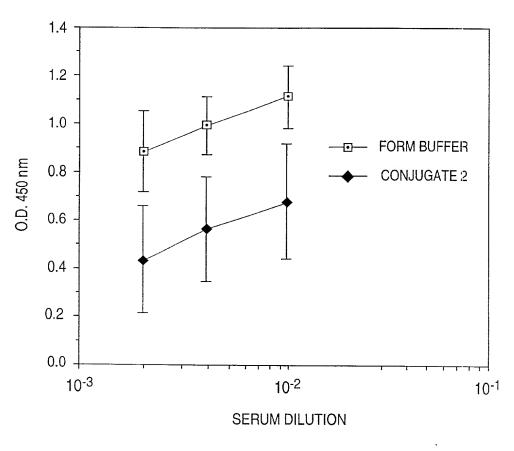
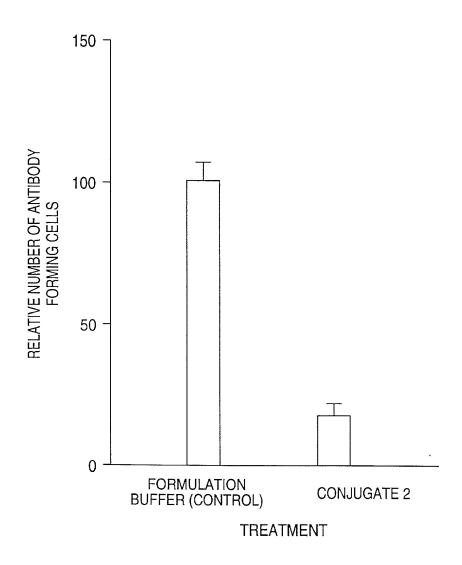


FIG. 10

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FIG. 11

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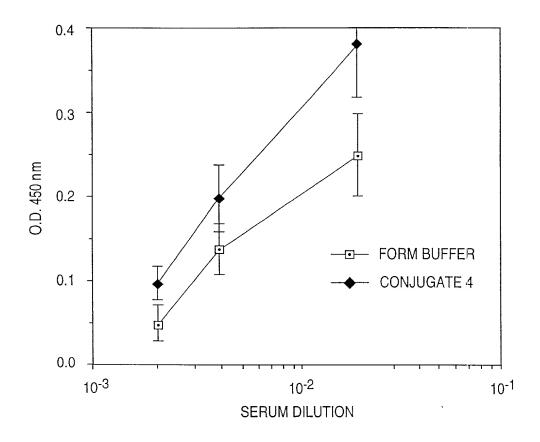


FIG. 12

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MELITTIN CONJUGATE #1, $R = H_2N-Cys-Trp-Ile-Lys-Arg-Lys-Arg-Gln-Gln-Gly-CO_2H$

 $MELITTIN\ CONJUGATE\ \#4,\ R=H_2N-Cys-Ile-Ser-Trp-Ile-Lys-Arg-Lys-Arg-Gln-Gln-Gly-CO_2H$ $MELITTIN\ CONJUGATE\ \#5,\ R=(H_2N-Trp-Ile-Lys-Arg-Lys-Arg-Gln-Gln)_2-Lys-Cys-Gly-CO_2H$ MELITTIN CONJUGATE #3, R = $H_2N-Trp-lle-Lys-Arg-Lys-Arg-Gln-Gln-Lys-Cys-Gly-CO_2H$ $MELITTIN\ CONJUGATE\ \#2,\ R=H_2N-Cys-Trp-Ile-Lys-Arg-Lys-Arg-Gln-Gln-Gly-CO_2H$ MELITTIN PEPTIDES ATTACHED THROUGH SULFUR ATOM ON ADDED CYSTEINE, AVERAGE N = APPROX. 74

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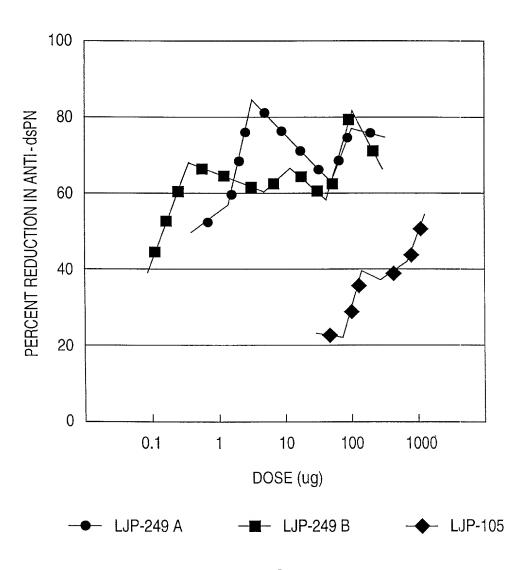


FIG. 14

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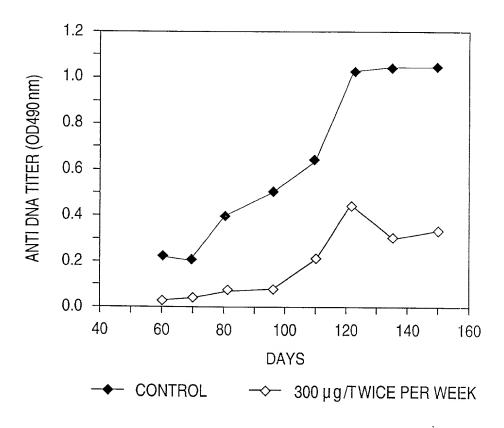


FIG. 15